(FILE 'HOME' ENTERED AT 12:09:51 ON 31 AUG 2010)

FILE 'HCAPLUS' ENTERED AT 12:11:23 ON 31 AUG 2010
L1 580 S (MANNOSE OR OLIGOMANNOSE OR MANNOOLIGOSACCHARIDE OR (MANNO OL

FILE 'STNGUIDE' ENTERED AT 12:11:25 ON 31 AUG 2010

FILE 'HCAPLUS' ENTERED AT 12:13:58 ON 31 AUG 2010
L2 24 S ((MANNOSE(3A)(OLIGOSACCHARIDE OR POLYSACCHARIDE OR DISACCHARI
L3 19 S L2 AND (PY<2004 OR AY<2004 OR PRY<2004)

```
=> file hcaplus
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                             ENTRY    SESSION
FULL ESTIMATED COST                                           0.66       0.66

FILE 'HCAPLUS' ENTERED AT 12:11:23 ON 31 AUG 2010
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FILE COVERS 1907 - 31 Aug 2010  VOL 153 ISS 10
FILE LAST UPDATED: 30 Aug 2010  (20100830/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Jun 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Jun 2010

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2010.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s (mannose or oligomannose or mannooligosaccharide or (manno
oligosaccharide))(4a)(methyl or methylated or methylation)

         47526 MANNOSE
           386 OLIGOMANNOSE
           277 MANNOOLIGOSACCHARIDE
          2883 MANNO
         35288 OLIGOSACCHARIDE
            46 MANNO OLIGOSACCHARIDE
               (MANNO(W)OLIGOSACCHARIDE)
       1159617 METHYL
         46417 METHYLATED
        111352 METHYLATION
L1         580 (MANNOSE OR OLIGOMANNOSE OR MANNOOLIGOSACCHARIDE OR (MANNO OLIGO
               SACCHARIDE))(4A)(METHYL OR METHYLATED OR METHYLATION)

=> file stnguide

COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                             ENTRY    SESSION
FULL ESTIMATED COST                                           2.91       3.57

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Aug 27, 2010 (20100827/UP).

=> file hcaplus
COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION
FULL ESTIMATED COST | 0.28 | 3.85

FILE 'HCAPLUS' ENTERED AT 12:13:58 ON 31 AUG 2010
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FILE COVERS 1907 - 31 Aug 2010 VOL 153 ISS 10
FILE LAST UPDATED: 30 Aug 2010 (20100830/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2010

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2010.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s ((mannose(3a)(oligosaccharide or polysaccharide or disaccharide or
trisaccharide or tetrasaccharide)) or mannobiose or mannotriose or manotetraose or
oligomannose or mannooligosaccharide or (manno oligosaccharide))(4a)(methyl or
methylated or methylation)

```
         47526 MANNOSE
         35288 OLIGOSACCHARIDE
         76563 POLYSACCHARIDE
         13861 DISACCHARIDE
          4937 TRISACCHARIDE
          3136 TETRASACCHARIDE
           424 MANNOBIOSE
           314 MANNOTRIOSE
             0 MANOTETRAOSE
           386 OLIGOMANNOSE
           277 MANNOOLIGOSACCHARIDE
          2883 MANNO
         35288 OLIGOSACCHARIDE
            46 MANNO OLIGOSACCHARIDE
                 (MANNO(W)OLIGOSACCHARIDE)
       1159617 METHYL
```

```
         46417 METHYLATED
        111352 METHYLATION
L2          24 ((MANNOSE(3A)(OLIGOSACCHARIDE OR POLYSACCHARIDE OR DISACCHARIDE
               OR TRISACCHARIDE OR TETRASACCHARIDE)) OR MANNOBIOSE OR MANNOTRIO
               SE OR MANOTETRAOSE OR OLIGOMANNOSE OR MANNOOLIGOSACCHARIDE OR
               (MANNO OLIGOSACCHARIDE))(4A)(METHYL OR METHYLATED OR METHYLATION
               )

=> s l2 and (PY<2004 or AY<2004 or pRY<2004)

      24051575 PY<2004
       4834566 AY<2004
       4308455 PRY<2004
L3          19 L2 AND (PY<2004 OR AY<2004 OR PRY<2004)

=> file stnguide

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       2.91       6.76

FILE 'STNGUIDE' ENTERED AT 12:14:03 ON 31 AUG 2010
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Aug 27, 2010 (20100827/UP).

<------User Break------>

=> d l3 1-19 ti abs bib
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y



L3   ANSWER 1 OF 19  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   Methylation analysis as a tool for structural analysis of wood
     polysaccharides
AB   In modern structural anal. of complex mixts. of wood polysaccharides,
     methylation anal. is still a valuable and powerful tool for linkage anal.
     Methylation anal. is described for the procedure methylation,
     methanolysis, silylation, and GC/MS.  The retention time indexes for the
     partly methylated Me glycosides of the relevant wood polysaccharides are
     listed together with the ratios of the isomers of the different structural
     units.  A calcn. model for relative molar response factors is suggested
     based on a published model for FID detection and on exptl. data.  Tested
     for oligosaccharides of known structure including xylotetraose,
     mannotriose and 63,64-α-D-galactosyl-mannopentaose, the model gives
     reproducible and sufficiently correct results.  The fate of xylose units
     substituted with 4-O-Me glucuronic acid at position 2 is investigated with
     a model compound
AN   2003:37288  HCAPLUS <<LOGINID::20100831>>
DN   138:256738
TI   Methylation analysis as a tool for structural analysis of wood
     polysaccharides
AU   Laine, Christiane; Tamminen, Tarja; Vikkula, Anne; Vuorinen, Tapani
CS   KCL, Science and Consulting, Espoo, Finland
SO   Holzforschung (2002), 56(6), 607-614
     CODEN: HOLZAZ; ISSN: 0018-3830
PB   Walter de Gruyter GmbH & Co. KG
```

DT Journal
LA English
OSC.G 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI A general method for co-crystallization of concanavalin A with carbohydrates
AB A small grid of conditions has been developed for cocrystn. of plant lectin Con A and polysaccharides. Crystals were obtained of complexes of Con A with α1,2- mannobiose, 1-methyl-α1,2-mannobiose, fructose, a trisaccharide, and a pentasaccharide. The crystals diffracted to resolns. of 1.75-2.7 Å using a Cu rotating-anode source. The crystals were grown in the presence of polyethylene glycol 6K (10-20%) at around pH 6.0. Optimization for each particular carbohydrate required small adjustments in the conditions; however, all complexes gave some crystalline precipitate in this limited grid. The α1,2-mannobiose complex crystals diffracted to 1.75 Å with space group I222 and cell dimensions a = 91.7, b = 86.8, c = 66.6 Å. One monomer was present in the asym. unit. The 1-methyl-α1-2 mannobioside complex crystallized in space group P212121 and cell dimensions a = 119.7, b = 119.7, c = 68.9 Å and diffracted to 2.75 Å. One tetramer was present in the asym. unit. Two crystal forms of the Con A-fructose complex were obtained. The 1st had space group P212121 with cell dimensions a = 121.7, b = 119.9, c = 67.3 Å with a tetramer in the asym. unit and diffracted to 2.6 Å. The 2nd crystallized in space group C2221 and cell dimensions a = 103.3, b = 117.9, c = 254.3 Å with 2 dimers in the asym. unit and diffracted to 2.42 Å. Structures and crystallization of the trisaccharide-Con A and pentasaccharide-Con A complexes were previously reported. In all complexes, the protein was found as a tetramer, although varying combinations of noncrystallog. and crystallog. symmetry were involved in generating the tetramer. The precise packing of the tetramer varied from crystal to crystal and it is likely that this variability facilitated crystallization
AN 1999:67600 HCAPLUS <<LOGINID::20100831>>
DN 130:248474
TI A general method for co-crystallization of concanavalin A with carbohydrates
AU Moothoo, Davina N.; Naismith, James H.
CS Centre for Biomolecular Science, The University, St Andrews, KY16 9ST, UK
SO Acta Crystallographica, Section D: Biological Crystallography (1999), D55(1), 353-355
CODEN: ABCRE6; ISSN: 0907-4449
PB Munksgaard International Publishers Ltd.
DT Journal
LA English
OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Ktr1p is an α-1,2-mannosyltransferase of Saccharomyces cerevisiae. Comparison of the enzymic properties of soluble recombinant Ktr1p and Kre2p/Mnt1p produced in Pichia pastoris
AB The yeast genome contains a KRE2/MNT1 family of nine related genes with amino acid similarity to the α1,2-mannosyltransferase Kre2p/Mnt1p, the only member of this family whose enzymic properties have been studied. In this study, the enzymic properties of Ktr1p, another member of this family, were studied and compared to those of Kre2p/Mnt1p. Recombinant

soluble forms of Kre2p/Mnt1p and Ktr1p lacking their N-terminal regions were expressed as secreted proteins from the methylotrophic yeast Pichia pastoris. After induction with methanol, the medium contained approx. 40 and 400 mg/l of soluble recombinant Kre2p/Mnt1p and Ktr1p resp. Both recombinant proteins were shown to exhibit α1,2-mannosyltransferase activity. The enzymes have an absolute requirement for Mn2+ and a similar Km for mannose (280-350 mM), methyl-α-mannoside (60-90 mM) and GDP-mannose (50-90 μM), but the Vmax was approx. 10 times higher for Kre2p/Mnt1p than for Ktr1p. The enzymes have similar substrate specificities and utilize mannose, methyl-α-mannoside, α-1,2-mannobiose and methyl-α-1,2- mannobiose, as well as Man15-30GlcNAc, derived from mnn2 mutant glycoproteins, as substrates. The enzymes do not utilize α-1,6-mannobiose, α-1,6-mannotriose, α-1,6-mannotetraose, mammalian Man9GlcNAc or yeast Man9-19GlcNAc. These results indicate that Kre2p/Mnt1p and Ktr1p are capable of participating in both N-glycan and O-glycan biosynthesis.
AN 1997:81656 HCAPLUS <<LOGINID::20100831>>
DN 126:196637
OREF 126:37915a,37918a
TI Ktr1p is an α-1,2-mannosyltransferase of Saccharomyces cerevisiae. Comparison of the enzymic properties of soluble recombinant Ktr1p and Kre2p/Mnt1p produced in Pichia pastoris
AU Romero, Pedro A.; Lussier, Marc; Sdicu, Anne-Marie; Bussey, Howard; Herscovics, Annette
CS McGill Cancer Cent., McGill Univ., Montreal, QC, H3G 1Y6, Can.
SO Biochemical Journal (1997), 321(2), 289-295
CODEN: BIJOAK; ISSN: 0264-6021
PB Portland Press
DT Journal
LA English
OSC.G 28 THERE ARE 28 CAPLUS RECORDS THAT CITE THIS RECORD (28 CITINGS)
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Methanol production by Mycobacterium smegmatis
AB M. smegmatis Cells produce [3H]methanol when incubated with [methyl-3H]methionine. The methanol is derived from S-adenosylmethionine rather than methyltetrahydrofolate. M. smegmatis Cells carboxymethylate several proteins, and some of the methanol probably results from their demethylation, but most of the methanol may come from an unidentified component with a high gel mobility. Although methanol in the medium reached 19 μM, it was not incorporated into the methylated mannose polysaccharide, a lipid carrier in this organism.
AN 1988:164537 HCAPLUS <<LOGINID::20100831>>
DN 108:164537
OREF 108:26979a,26982a
TI Methanol production by Mycobacterium smegmatis
AU Weisman, Lois S.; Ballou, Clinton E.
CS Dep. Biochem., Univ. California, Berkeley, CA, 94720, USA
SO Journal of Bacteriology (1988), 170(3), 1393-5
CODEN: JOBAAY; ISSN: 0021-9193
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L3 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI A fluorescence assay for α-1,2-mannosidases involved in glycoprotein processing reactions
AB A highly specific, sensitive, and convenient fluorescence assay for

α-1,2-mannosidases involved in glycoprotein processing reactions is described. The assay utilizes a coupled enzyme system to determine the amount of free mannose liberated from the disaccharide O-methyl-2-O-α-D-mannopyranosyl-α-D-mannopyranoside by the α-1,2-mannosidase. The assay was used to determine the substrate specificity of a Ca2+-activated α-1,2-mannosidase purified from rabbit liver microsomes. The microsomal mannosidase was specific for hydrolysis of the α-1,2 linkage. The mannosyl linkages in α-1,3- and α-1,6-linked Me disaccharides, in methyl-α-D-mannopyranoside, and in yeast mannan were hydrolyzed at rates of ≤2% that noted with the α-1,2-linked disaccharide. Mannosidase activity was linear with time and was proportional to enzyme concentration The Km for the α-1,2-linked Me disaccharide is 0.5 mM.

AN 1988:108524 HCAPLUS <<LOGINID::20100831>>
DN 108:108524
OREF 108:17699a,17702a
TI A fluorescence assay for α-1,2-mannosidases involved in glycoprotein processing reactions
AU Schutzbach, John S.
CS Dep. Microbiol., Univ. Alabama, Birmingham, AL, 35294, USA
SO Analytical Biochemistry (1987), 167(2), 279-83
CODEN: ANBCA2; ISSN: 0003-2697
DT Journal
LA English

L3 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Immunoassay kits for detection of α-fetoprotein fractions
AB A kit for detection of α-fetoprotein (AFP) fractions (cancer marker) in body fluids consists of (1) lectin-containing agarose gel, (2) anti-AFP antibody immobilized on nitrocellulose membranes, (3) monosaccharides or oligosaccharides which specifically interact with the lectin, (4) anti-AFP antibody prepared by immunization of another animal species, (5) enzyme-labeled antibodies to the Ig, and (6) chromogen substrates for the enzyme. The lectin is concanavalin A, lentil lectin A, or kidney bean lectin. The monosaccharide is α- methyl-D-mannoside, glucose, or mannose and the oligosaccharide is maltose.

AN 1987:210590 HCAPLUS <<LOGINID::20100831>>
DN 106:210590
OREF 106:34093a,34096a
TI Immunoassay kits for detection of α-fetoprotein fractions
IN Takeda, Kazuhisa; Taga, Hiroko; Hirai, Hidematsu
PA Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61292062	A	19861222	JP 1985-123969	19850606 <--

PRAI JP 1985-123969 19850606 <--
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L3 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI 3-O-Methylation of mannose residues. A novel reaction in the processing of N-linked oligosaccharides occurring in Mucor rouxii
AB Yeast- and mycelial-form cells of the dimorphic fungus M. rouxii incubated with [U-14C]glucose synthesized Man-P-dolichol, Glc-P-dolichol, and Glc3Man9GlcNAc2-P-P-dolichol. The oligosaccharides that migrated

apparently as single substances on paper chromatog. could be separated into 3 different populations by paper electrophoresis in sodium borate buffer. The fastest migrating substances contained only mannose and N-acetylglucosamine residues, whereas the other 2 contained, in addition, different proportions of 3-O-methylmannose units. The oligosaccharides with the highest content of 3-O-methylmannose residues appeared to be completely resistant to α-mannosidase degradation; they were, however, cleaved by endo-β-N-acetylglucosaminidase H. Mycelial cells synthesized a much higher proportion of 3-O-methylmannose-containing oligosaccharides than yeast cells. Cells incubated with [methyl-14C]methionine labeled only the N-linked oligosaccharides containing 3-O-methylmannose residues. Apparently transfer of Glc3Man9GlcNAc2 to protein is followed by excision of glucose and probably 1 or 2 mannose residues, followed by further mannosylation and in some cases also methylation of oligosaccharides. This represents a novel reaction in the processing of N-linked oligosaccharides.

AN 1984:626603 HCAPLUS <<LOGINID::20100831>>
DN 101:226603
OREF 101:34327a,34330a
TI 3-O-Methylation of mannose residues. A novel reaction in the processing of N-linked oligosaccharides occurring in Mucor rouxii
AU Lederkremer, Gerardo Z.; Parodi, Armando J.
CS Inst. Invest. Bioquim. "Fundacion Campomar", Buenos Aires, 1405, Argent.
SO Journal of Biological Chemistry (1984), 259(20), 12514-18
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L3 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Biosynthesis of the mycobacterial methylmannose polysaccharide. Identification of a 3-O-methyltransferase
AB The methylmannose polysaccharide (MMP), found in the cytoplasm of Mycobacterium smegmatis, is composed of 10 to 13 3-O-methylmannoses joined by α1→4 linkages. Each mol. is terminated by an unmethylated mannose, and the reducing end is blocked by an α-linked Me aglycon. Two enzymes involved in MMP biosynthesis were identified in cell exts., a previously described α1→4 mannosyltransferase and a 3-O-methyltransferase. Studies of substrate specificity and characterization of the products formed demonstrate that MMP elongation occurs via sequential mannosylation and methylation. The 3-O-methyltransferase, unlike the mannosyltransferase, is readily solubilized. It catalyzes transfer of a Me group from S-adenosylmethionine to position 3 of a terminal α1→4-linked mannose. The labeled product formed from S-[methyl-3H]adenosylmethionine and Man-MeMan5-OCH3 was characterized both by its resistance to IO4- oxidation and by the release of labeled 3-O-methylmannose upon acid hydrolysis. Like the mannosyltransferase, the 3-O-methyltransferase utilizes shorter oligomeric acceptors preferentially. The Km values off the methyltransferase for Man-MeMan4-OCH3 and S-adenosylmethionine are 0.7 and 0.4 mM, resp. Because MMP homologs isolated from the cell are terminated by an unmethylated mannose, the methyltransferase appears to be responsible for MMP chain termination. Moreover, palmitoyl-CoA selectivity inhibits methylation of Man-MeMan12-OCH3 when Man-MeMan4-OCH3 and Man-MeMan12-OCH3 are incubated together with the methyltransferase, which suggests that complex formation between the longer homologs and lipids may play a role in the termination process.

AN 1984:188537 HCAPLUS <<LOGINID::20100831>>
DN 100:188537
OREF 100:28611a,28614a
TI Biosynthesis of the mycobacterial methylmannose polysaccharide. Identification of a 3-O-methyltransferase

AU Weismann, Lois S.; Ballou, Clinton E.
CS Dep. Biochem., Univ. California, Berkeley, CA, 94720, USA
SO Journal of Biological Chemistry (1984), 259(6), 3464-9
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L3 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Biosynthesis of the methylated mannose polysaccharide from mycobacteria
AB Unavailable
AN 1983:519098 HCAPLUS <<LOGINID::20100831>>
DN 99:119098
OREF 99:18287a,18290a
TI Biosynthesis of the methylated mannose polysaccharide from mycobacteria
AU Weisman, Lois Sue
CS Univ. California, Berkeley, CA, USA
SO (1982) 228 pp. Avail.: Univ. Microfilms Int., Order No. DA8313012
From: Diss. Abstr. Int. B 1983, 44(1), 61
DT Dissertation
LA English

L3 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI 2-O-Methyl-D-mannose in an extracellular polysaccharide from Hyphomicrobium sp
AB An extracellular acidic polysaccharide, hyphomicran, produced by Hyphomicrobium species JTS-811 from MeOH contained a monomethyl sugar found in nature for the 1st time. This sugar was identified as 2-O-methyl-D-mannose (I) by spectrophotometric and synthetic data. Hyphomicran consisted of D-glucose, D-mannose, I, and pyruvic acid in the relative proportions of 2:1:1:1. By methylation anal., pyruvic acid was proved to be linked as a ketal to the O-4 and O-6 positions of a terminal 2-O-methyl-D-mannopyranosyl residue.
AN 1983:85096 HCAPLUS <<LOGINID::20100831>>
DN 98:85096
OREF 98:12941a,12944a
TI 2-O-Methyl-D-mannose in an extracellular polysaccharide from Hyphomicrobium sp
AU Kanamaru, Koichiro; Iwamuro, Yoshiaki; Mikami, Yoichi; Obi, Yukiteru; Kisaki, Takuro
CS Cent. Res. Inst., Japan Tobacco and Salt Public Corp., Yokohama, 227, Japan
SO Agricultural and Biological Chemistry (1982), 46(10), 2419-24
CODEN: ABCHA6; ISSN: 0002-1369
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L3 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Polysaccharide containing 6-O-methyl-D-mannose in Chlorogloeopsis PCC 6912
AB A H2O-soluble high-mol.-weight polysaccharide sedimenting at 105,000 g was extracted by phenol/H2O from Chlorogloeopsis PCC 6912. The polysaccharide contained mannose, 6-O-methyl-D-mannose, glucose, rhamnose, glucuronate, and galacturonate as the main sugars, but essentially no lipid. The 6-O-methyl-D-mannose was present partly in terminal linkage and partly 1,3-chain-linked, whereas 3-O-methyl-D-mannose exclusively occupied terminal positions. The polysaccharide, which had a

different composition and location from the 2 sheath polysaccharides, presumably represented a cell wall component of PCC 6912.
AN 1982:452195 HCAPLUS <<LOGINID::20100831>>
DN 97:52195
OREF 97:8743a,8746a
TI Polysaccharide containing 6-O-methyl-D-mannose in Chlorogloeopsis PCC 6912
AU Schrader, Michael; Drews, Gerhart; Weckesser, Juergen; Mayer, Hubert
CS Inst. Biol. 2, Albert-Ludwigs-Univ., Freiburg/Br., D-7800, Fed. Rep. Ger.
SO Journal of General Microbiology (1982), 128(2), 273-7
CODEN: JGMIAN; ISSN: 0022-1287
DT Journal
LA English
OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

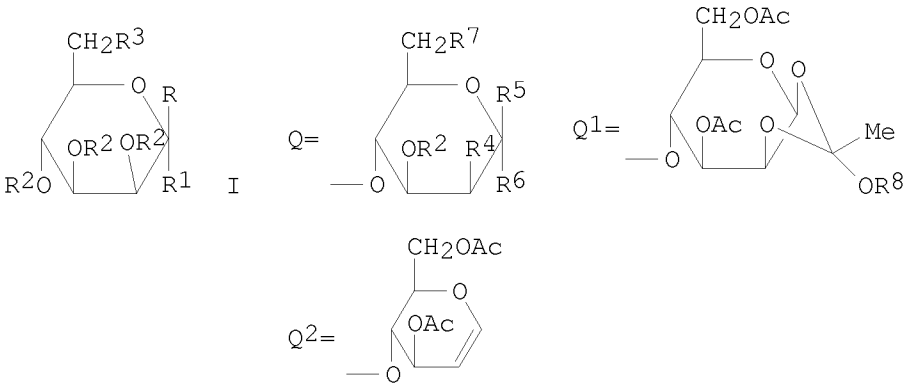
L3 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Isolation and characterization of the Glc3Man9GlcNAc2 from lipid-linked oligosaccharides of plants
AB Lipid-linked oligosaccharides were isolated from suspension-cultured soybean cells incubated in the presence of [2-3H]mannose or [2-3H]glucose. After purification of the lipid-linked oligosaccharides on DEAE-cellulose, the oligosaccharides were released by mild acid hydrolysis and isolated by gel filtration on columns of Bio-Gel P-4. The major oligosaccharide, labeled with either [3H]mannose or [3H]glucose, that comigrated with an authentic sample of Glc3Man9GlcNAc2 was purified to homogeneity by repeated chromatog. on Bio-Gel P-4. This oligosaccharide was characterized by its susceptibility to a variety of enzymic treatments (i.e., endoglucosaminidase H, α-mannosidase, a liver membrane preparation containing the processing glucosidases) and anal. of the resulting products. It was also characterized by methylation anal. and identification of the resulting methylated sugars. Thus, methylation of the [3H] mannose-labeled oligosaccharide gave rise to 2,3,4,6-tetramethylmannose, 3,4,6-trimethylmannose, and 2,4-dimethylmannose, as well as a trace amount of 2,4,6-trimethylmannose. Methylation of the [3H]glucose-labeled oligosaccharide yielded 2,3,4,6-tetramethylglucose, 3,4,6-trimethylglucose, and 2,4,6-trimethylglucose in almost equal amts. These data suggest that the plant Glc3Man9GlcNAc2 is probably similar, if not identical, to the animal Glc3Man9GlcNAc2. The biosynthesis of this oligosaccharide was inhibited when tunicamycin was included in the incubation mixts.
AN 1982:139717 HCAPLUS <<LOGINID::20100831>>
DN 96:139717
OREF 96:22921a,22924a
TI Isolation and characterization of the Glc3Man9GlcNAc2 from lipid-linked oligosaccharides of plants
AU Hori, Hidetaka; James, Douglas W., Jr.; Elbein, Alan D.
CS Health Sci. Cent., Univ. Texas, San Antonio, TX, 78284, USA
SO Archives of Biochemistry and Biophysics (1982), 215(1), 12-21
CODEN: ABBIA4; ISSN: 0003-9861
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L3 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Synthetic studies on cell-surface glycans. Part 12. Proton and carbon-13 NMR spectral study of synthetic methyl D-mannooligosaccharides
AB 1H- and 13C-NMR spectra for 16 synthetic Me manno-oligosaccharides were recorded, and the signals for the anomeric protons and anomeric carbon atoms in branched manno-pentaosides and -hexaosides were assigned, based on the data for Me manno-biosides and -triosides. These NMR data identified the branching pattern of high-mannose types of glycans of glycopeptides with those of unambiguously synthesized

manno-oligosaccharides, and confirmed the structures proposed for such glycans.
AN 1982:123143 HCAPLUS <<LOGINID::20100831>>
DN 96:123143
OREF 96:20233a,20236a
TI Synthetic studies on cell-surface glycans. Part 12. Proton and carbon-13 NMR spectral study of synthetic methyl D-mannooligosaccharides
AU Ogawa, Tomoya; Sasajima, Kikuo
CS Inst. Phys. Chem. Res., Wako, 351, Japan
SO Carbohydrate Research (1981), 97(2), 205-27
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English
OSC.G 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

L3 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Immunochemical study of bakers' yeast mannan prepared by fractional precipitation with cetyltrimethylammonium bromide
AB The mannan of bakers' yeast (a wild-type strain of Saccharomyces cerevisiae), prepared by means of cetyltrimethylammonium bromide, was investigated for its immunochem. properties. Upon treatment with 10 mM HCl at 100° for 60 min, this mannan gave a modified mannan, mannobiose, and mannose. By the action of 100 mM NaOH at room temperature for 18 h, another modified mannan was obtained together with mannotetraose, mannotriose, mannobiose, and mannose. In both acid- and alkali-degradation products, mannobiose was a common major oligosaccharide component. The results of methylation analyses indicated that mannobiose in the former degradation product consisted solely of α1→3-linked biose, whereas the latter one contained α1→2- and α1→3-linked isomers in a molar ratio of 1.8:1.0. The findings of quant. precipitin assay of the parent mannan and the 2 modified mannans against the homologous anti-S. cerevisiae serum revealed that the amts. of precipitated antibody by each modified mannan were nearly identical, and were significantly smaller than that of the parent mannan. Because the antibody-precipitating activities of both modified mannans were exactly identical to that of the mannan prepared by the Fehling solution method, it is evident that the α1→3-linked mannobiosyl residues dominate a large part of the serol. activity of the parent intact mannan, and that the mannan prepared by the Fehling solution method corresponds to a degradation product lacking these immunodominant mannobiosyl residues.
AN 1981:599430 HCAPLUS <<LOGINID::20100831>>
DN 95:199430
OREF 95:33244h,33245a
TI Immunochemical study of bakers' yeast mannan prepared by fractional precipitation with cetyltrimethylammonium bromide
AU Okubo, Yasuhito; Shibata, Nobuyuki; Ichikawa, Tsutomu; Chaki, Seiichi; Suzuki, Shigeo
CS 2nd Dep. Hyg. Chem., Tohoku Coll. Pharm., Sendai, 983, Japan
SO Archives of Biochemistry and Biophysics (1981), 212(1), 204-15
CODEN: ABBIA4; ISSN: 0003-9861
DT Journal
LA English
OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L3 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Studies on the modification of mannobiose and synthesis of methyl 4-O-(β-D-rhamnosyl)-α-D-olivoside
GI



AB Acid-catalyzed reaction of α-mannobiose octaacetate with CCl3CH2OH or PhOH gave I [R = Q (R2 = Ac, R4 = R7 = AcO, R5 = H, R6 = Br) R1 = Cl3CH2O, R2 = Ac, R3 = AcO] and I [R = Q (R2 = Ac, R4 = R7 = AcO, R5 = H, R6 = PhO) R1 = H, R2 = Ac, R3 = AcO]. Using AcOH-HBr gave I [R = Q (R2 = Ac, R4 = R7 = AcO, R5 = H, R6 = Br), R1 = Br, R2 = Ac, R3 = AcO](II). Koenigs-Knorr reaction of II with MeOH or PhCH2OH gave orthoesters I [R = Q1 (R8 = Me, PhCH2) R1 = H, R2 = Ac, R3 = AcO], resp. Iodomethoxylation of mannobial hexaacetate (I, R = Q2, R1 = H, R2 = Ac, R3 = AcO), prepared from II, gave I [R = Q (R2 = Ac, R4 = iodo, R5 = H, R6 = MeO, R7 = AcO) R1 = H, R2 = Ac, R3 = AcO]. Selective tosylation of I [R = Q (R2 = R5 = H, R4 = R7 = HO, R6 = PhO) R1 = H, R2 = H, R3 = HO] and I [R = Q (R2 = R5 = H, R4 = iodo, R6 = MeO, R7 = AcO) R1 = R2 = H, R3 = HO] gave I [R = Q (R2 = tosyl, R4 = R7 = tosyloxy) R2 = tosyl, R3 = tosyloxy] and I [R = Q (R7 = tosyloxy) R3 = tosyloxy], whose iodination gave I (R = Q (R4 = R7 = iodo), R3 = iodo] and I [R = Q (R4 = R7 = iodo), R3 = iodo], resp. Subsequent reduction by NiCl2-NaBH4 gave I [R = Q (R2 = R4 = AcO, R5 = R7 = H, R6 = PhO) R1 = R3 = H, R2 = Ac] and I [R = Q (R2 = R4 = R5 = R7 = H, R6 = MeO), R1-R3 = H].
AN 1980:22736 HCAPLUS <<LOGINID::20100831>>
DN 92:22736
OREF 92:3873a,3876a
TI Studies on the modification of mannobiose and synthesis of methyl 4-O-(β-D-rhamnosyl)-α-D-olivoside
AU Thiem, Joachim; Sievers, Axel
CS Inst. Org. Chem. Biochem., Univ. Hamburg, Hamburg, D-2000/13, Fed. Rep. Ger.
SO Chemische Berichte (1979), 112(3), 1035-45
CODEN: CHBEAM; ISSN: 0009-2940
DT Journal
LA German
OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L3 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Characterization of 3-O-methyl-D-mannose polysaccharide precursors in Mycobacterium smegmatis
AB M. smegmatis, When incubated under appropriate conditions with L-methionine-Me-3H, accumulates significant amts. of small Me-3H-labeled oligosaccharides that are related to the known 3-O-methyl-D-mannose polysaccharides. The water-soluble material from the 70% EtOH extract of such cells was fractionated by Sephadex G-50 column chromatog., high pressure liquid chromatog., and Bio-Gel P-4 column chromatog. Two homologous series of penta- through decamannosyl methylated oligosaccharides were obtained and characterized by chemical degradation and NMR. All hexoses were α(1

→ 4) linked, the Me aglycon had the α configuration, and the mannose was methylated in position 3. All of the compds. were structurally related to each other as though they were biosynthetic precursors of the larger 3-O-methylmannose polysaccharides. A methylmannobiose that may represent an early intermediate in the pathway was detected in small amts.

AN 1979:416343 HCAPLUS <<LOGINID::20100831>>
DN 91:16343
OREF 91:2713a,2716a
TI Characterization of 3-O-methyl-D-mannose polysaccharide precursors in Mycobacterium smegmatis
AU Yamada, Haruki; Cohen, Robert E.; Ballou, Clinton E.
CS Dep. Biochem., Univ. California, Berkeley, CA, 94720, USA
SO Journal of Biological Chemistry (1979), 254(6), 1972-9
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L3 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Heterogeneity and refined structures of 3-O-methyl-D-mannose polysaccharides from Mycobacterium smegmatis
AB The 3-O-methyl-D-mannose-containing polysaccharide (MMP) from M. smegmatis is a mixture of ≥4 isomers separable by gel filtration. The major component is 3-O-methylmannose but all contain small amts. of mannose. The mol. wts. range from 2040 to 2490 and all are nonreducing. After Smith degradation, all yield a single large and ≥1 small fragments that give 3-O-methylmannose as the sole product of complete acid hydrolysis. Controlled acid hydrolysis of MMP releases 6% of the Me groups as MeOH at a rate characteristic for the hydrolysis of Me α-D-mannopyranoside. 1H NMR spectra of MMP show a major Me ether proton peak and a 2nd small peak at higher field equivalent to .apprx.1 Me group/mol. These results are consistent with the presence of an α-Me aglycon at the reducing end of the chains. Methylation anal. and Smith degradation indicate that the 3-O-methylmannose polysaccharides are linear unbranched chains of 11-14 sugar units, each terminated by a single mannose at the nonreducing end and by a Me aglycon at the reducing end. Each isomer shows microheterogeneity, with 1 or 2 unmethylated mannose units near the middle of some but not all of the chains.

AN 1977:401461 HCAPLUS <<LOGINID::20100831>>
DN 87:1461
OREF 87:263a,266a
TI Heterogeneity and refined structures of 3-O-methyl-D-mannose polysaccharides from Mycobacterium smegmatis
AU Maitra, Shyamal Kumar; Ballou, Clinton E.
CS Dep. Biochem., Univ. California, Berkeley, CA, USA
SO Journal of Biological Chemistry (1977), 252(8), 2459-69
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

L3 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Structure and immunochemistry of Hansenula wingei Y-2340 mannan
AB As a preliminary to characterization of the sexual agglutination factors of H. wingei NRRL Y-2340, the total cell wall mannan from the haploid mating type 5 cell was analyzed by chemical and immunochem. methods. Methylation of the mannan showed that it was highly branched. Acetolysis gave 5 neutral fragments (mannose, mannobiose, mannotriose, mannotetraose, and mannopentaose), and methylation of these oligosaccharides revealed that they were isomeric mixts. which differed in

the position and the amount of 1→2 and 1→3 linkages. The optical rotations and the NMR spectra established that the mannose units in the oligosaccharides were α linked. Thus, in contrast to the 1→6-linked backbone in Saccharomyces cerevisiae mannan, the Y-5 mannan appears to have a main chain in which 1→2, 1→3, and 1→6 linkages all are present. Less than 10% of the carbohydrate was released as oligosaccharides by alkaline treatment (β elimination), indicating that most of the mannose was present in the form of large polysaccharide units probably attached to asparagine in the protein. Immunochem. studies of Y-5 mannan revealed that .apprx.30% of the homologous precipitin reaction involved the terminal αMan(1→3)αMan(1→3)Man trisaccharide unit of the side chains, whereas the remaining 70% involved some acid-labile structure in the mannan. Part of the acid-labile antigenic reactivity was accounted for by the α-D-glucosyl phosphodiester determinant but the chemical structure of the rest is not known.

AN 1974:447191 HCAPLUS <<LOGINID::20100831>>
DN 81:47191
OREF 81:7529a,7532a
TI Structure and immunochemistry of Hansenula wingei Y-2340 mannan
AU Yen, Pauline H.; Ballou, Clinton E.
CS Dep. Biochem., Univ. California, Berkeley, CA, USA
SO Biochemistry (1974), 13(11), 2420-7
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English
OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L3 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Glycosidases of Phaseolus vulgaris. II. Isolation and general properties
AB α-Galactosidase, β-galactosidase, α-mannosidase, β-glucosidase, and β-acetylglucosaminidase, have been purified from the germinating seeds of P. vulgaris. All 5 enzymes have been simultaneously isolated in a highly active form. The pH optimum, Km, and energy of activation of each glycosidase for the reaction of hydrolysis of the appropriate p-nitrophenyl glycoside have been determined The specificity of the enzymes has been studied by using synthetic and natural substrates such as melibiose, raffinose, stachyose, lactose, mannobiose, methyl α-D-mannopyranoside, cellobiose, gentiobiose, sophorose, and methyl β-D-glucopyranoside. All these enzymes appear to be highly specific for the glycopyranosyl group and the anomeric configuration of the glycosidic linkage. Their action on macromols., such as galactomannans from guar and locust bean gums, desialyzed fetuin and its tryptic glycopeptides, a glycopeptide from orosomucoid, and RNase B, has been studied. 41 references.
AN 1968:27101 HCAPLUS <<LOGINID::20100831>>
DN 68:27101
OREF 68:5215a,5218a
TI Glycosidases of Phaseolus vulgaris. II. Isolation and general properties
AU Agrawal, Krishna M. L.; Bahl, Om P.
CS State Univ. of New York, Buffalo, NY, USA
SO Journal of Biological Chemistry (1968), 243(1), 103-11
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
OSC.G 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)